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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,734	08/25/2003	Klaus Moeller	23390-000121/US	1155

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EXAMINER	
CHAU, COREY P	
ART UNIT	PAPER NUMBER
2615	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/646,734	MOELLER ET AL.	
	Examiner	Art Unit	
	Corey P. Chau	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *51-67* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *51-67* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/30/2007 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 51-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4185167 to Cunningham et al. (hereafter as Cunningham) in view of U.S. Patent No. 5406634 to Anderson et al. (hereafter as Anderson) and U.S. Patent Application Publication No. 20030142833 to Roy et al. (hereafter as Roy).

4. Regarding Claim 51, Cunningham discloses a sound masking system for controlling ambient noise in a physical environment (Figs. 3 and 5), comprising:

a communication network (Fig. 5; column 6, lines 26-37); and

a plurality of sound masking units (M)(Fig. 5; column 6, lines 26-37), the plurality of sound masking units communicatively connected to one another via the

communication network (Fig. 5; column 6, lines 26-37), each sound masking unit including an associated sound masking signal generator (Fig. 3; column 4, lines 1-18), each sound masking signal generator configured to generate and output a sound masking signal (Fig. 3; column 4, lines 1-18).

Cunningham does not expressly discloses each sound masking signal generator configured to generate and output a sound masking signal based on a control signal received over the communication network; and

a control unit configured to generate the control signals to selectively control operation of the plurality of sound masking units, and configured to send the control signals over the communication network.

Anderson discloses an intelligent speaker unit for speaker system network comprising a plurality of speaker units (i.e. sound masking units), wherein the plurality of speaker units are controlled by control data transmitted to the plurality of speaker units; and a control unit (Fig. 1; column 2, lines 55-64; column 3, lines 33-62) configured to generate the control signals to selectively control operation of the plurality of speaker units, and configured to send the control signals over the communication network (Fig. 1; column 2, lines 20-68; column 3, lines 33-62) in order to allow an operator to remotely control the plurality of speaker units, which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all

speakers in a network or zone (Figs. 1 and 7; column 2, lines 20-68; column 3, lines 33-62).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cunningham with the teaching of Anderson to incorporate the functions of a intelligent speaker unit for use in a speaker network system (such as the speaker network system of Cunningham)(Cunningham, Fig. 5) in order to allow an operator to remotely control the plurality of speaker units (i.e. sound masking units), which provide ease of adjusting a plurality of parameters such as volume, speaker equalization, and sound delay at a desired time; to receive status and/or control information from the speaker unit; and to provide more flexibility in a speaker system network by allowing an operator to transmit a message to only selected speakers in a network, or in multiple networks or zones, rather than all speakers in a network or zone. Therefore Cunningham as modified discloses each sound masking signal generator configured to generate and output a sound masking signal (Cunningham, Fig. 3; column 4, lines 1-18) based on a control signal received over the communication network (i.e. the sound masking package of Cunningham receives control data from the control unit of Anderson in order for each sound masking signal generator of Cunningham to be remotely controlled by the control unit of Anderson in order for each sound masking signal generator configured to generate and output a sound masking signal based on a control signal received over the communication network) (Cunningham, Fig. 5; Anderson, column 3, lines 56-62); and a control unit configured to generate the control signals to selectively control operation of the plurality

of sound masking units, and configured to send the control signals over the communication network (Anderson, Figs. 1 and 7; column 2, lines 20-68; column 3, lines 33-62).

Cunningham as modified discloses electric circuit for the introduction of an audible signal from a remote source such as music, paging calls, emergency calls or the like into the area occupied by the listener (column 1, lines 62-68; column 3, lines 15-27), but does not expressly disclose each sound masking unit is configured to selectively output a paging signal received over the communication network based on the control signal and configured to send the paging signals over the communication network.

Roy discloses a sound distributing masking sound, paging, and music throughout a space, wherein the paging system comprises various types of pages, such as microphone, telco, master page, and all mute, which provides flexibility, controllability, and sound quality. The page matrix 63 receives pre-filtered and processed signals from the microphone input 12 and the telco input 13 and routes these signals to the processor outputs according to user defined routing schemes. More specifically, microphone paging signals are selectively coupled to each of the processor's eight outputs at crosspoints 60 within the page matrix 63. At each crosspoint, the signal can be coupled to or disconnected from the corresponding output line for selectively applying the microphone paging signals to any combination of the eight processor outputs. Crosspoint functions are user accessible through the GUI such that a user may program which outputs and thus which zones within the space are to receive microphone paging announcements. Furthermore, the processor is programmed to

allow for up to six different paging -to-output assignment configurations for maximum paging flexibility. The paging assignment that is activated for any given page is selected through six contact closures provided on the processor chassis. For example, it may be determined that certain types of pages need only be delivered within a zone where staff members work in an open plan architecture, other types should be delivered only in executive office zones, and other types need only be delivered in client waiting room zones. Such a paging scheme is easily set up through an attached GUI by clicking on the zone or combination of zones that are to be active for each of the six different page assignment configurations. Switches connected to the six contact closures can then be provided at the location of the microphone so that a paging clerk can select the appropriate paging configuration for each page to be made. Telco paging signals received from a remote telephone at telco input 13 also are selectively coupled to each of the processor's eight outputs at crosspoints 70 within the page matrix 63. At each crosspoint, the signal can be coupled to or disconnected from the corresponding output line for selectively applying the microphone paging signals to any combination of the eight processor outputs. Just as with crosspoints 60 for microphone paging signals, crosspoint functions for telco pages also are user accessible through the GUI such that a user may program which outputs and thus which zones within the space are to receive telco paging announcements. Accordingly, the telco page feature of this invention provides for greatly expanded paging capabilities since a page can be delivered to selected zones of the space from any telephone virtually anywhere in the world. Furthermore, line 2 input 19 also serves as a master page input when the

processor is configured as an "expansion" processor and driven by an output of a "master" processor. In the page matrix of the expansion processor, the master page audio signal is coupled to all eight of the expansion processor's outputs at crosspoints 75 (Figs. 2a-c; page 3, paragraph 0017; pages 8-9, paragraphs 0048-0055; page 12, paragraph 0069). Therefore the page calls is selected from a various types of pages, such as microphone, telco, master page, and all mute, which provides flexibility, controllability, and sound quality. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Cunningham as modified with the teaching of Roy to incorporate various types of pages to the paging system of Cunningham, wherein the paging calls are selected from a various types of pages such as microphone, telco, master page, and all mute in order to provide flexibility, controllability, and sound quality.

Therefore, Cunningham as modified discloses each sound masking unit is configured to selectively output a paging signal received over the communication network based on the control signal and configured to send the paging signals over the communication network (Cunningham, column 1, lines 62-68; column 3, lines 15-27; Anderson, Figs. 1 and 7; column 2, lines 20-68; column 3, lines 33-62; Roy, Figs. 2a-c; page 3, paragraph 0017; pages 8-9, paragraphs 0048-0055; page 12, paragraph 0069).

5. Regarding Claim 52, Cunningham as modified discloses the plurality of sound masking unit are connected in a series in the communication network (Cunningham, Fig. 5).

6. Regarding Claim 53, Cunningham as modified discloses each of the plurality of sound masking units includes a first interface and a second interface, the first interface interfacing with an upstream side of the communication network, and the second interfacing with a downstream side of the communication network, the upstream side being closer to the control unit and the downstream side being further from the control unit (Cunningham, Fig. 5; Anderson, Fig. 1).

7. Regarding Claim 54, Cunningham as modified discloses the plurality of sound masking units are associated with a plurality of sound masking zones, each sound masking unit being associated with one of the plurality of sound masking zones, and the sound masking units providing sound masking for the associated sound masking zone independently of the other sound masking zones (i.e. Cunningham as modified comprising control data which enables the control of the desired sound masking package or packages in order to perform the desired functions)(Cunningham, Fig. 5; Anderson, Fig. 1; column 4, lines 33-57).

8. Regarding Claim 55, Cunningham as modified discloses the sounds masking units associated with each sound masking zone provide sound masking tailored to suppress sound in the associated sound masking zone (Cunningham, Fig. 1, column 1, lines 35-68).

9. Regarding Claim 56, Cunningham as modified does not expressly disclose a number of the plurality of sound masking units is different from a number of the plurality of sound masking zones. However, the Examiner takes Official Notice that it is well known in the art to provide a number of the plurality of sound masking units is different

from a number of the plurality of sound masking zones in order to provide the desired configuration needed for different areas which produces a comfortable listening environment for people. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cunningham as modified to provide a number of the plurality of sound masking units is different from a number of the plurality of sound masking zones in order to provide the desired configuration need for different areas which produces a comfortable listening environment for people, wherein the control unit of Cunningham as modified can selectively control the sound masking package or packages in a network, or in multiple networks or zones to perform the desired operations.

10. Regarding Claim 57, Cunningham as modified discloses the control unit includes an address generator for assigning addresses to the sound masking units (Anderson, column 7, lines 10-23).

11. Regarding Claim 58, Cunningham as modified discloses the address generator comprises a component for generating a logical address for each of the sound masking units (i.e. it is implicit that Cunningham as modified discloses a component for generating a logical address for each of the sound masking units). Cunningham as modified does not expressly disclose the logical address being derived from an identifier associated with each of the sound masking units. However, the Examiner takes Official Notice that it is well known in the art to provide logical address being derived from an identifier associated with each of the sound masking units in order to derived an address for the sound masking unit which it unique to that sound masking unit which

was provided by the manufacturer so that the control unit does not have to generate a random address for the sound masking unit, therefore providing a fixed address which makes process of generating an address simpler. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Cunningham as modified to provide logical address being derived from an identifier associated with each of the sound masking units in order to derived an address for the sound masking unit which it unique to that sound masking unit which was provided by the manufacturer so that the control unit does not have to generate a random address for the sound masking unit, therefore providing a fixed address which makes process of generating an address simpler.

12. Regarding Claim 59, Cunningham as modified discloses each of the sound masking units includes a control component. the control component being selectively responsive to the control signals for controlling characteristics of the sound masking signal (Cunningham, Fig. 3; column 4, line 29 to column 5, lines 16; column 5, lines 39-66; Anderson, Figs. 1-2 and 5-7).

13. Regarding Claim 60, Cunningham as modified discloses the controllable characteristics of the sound masking signal include a variable contour characteristic.

14. Regarding Claim 61, Cunningham as modified discloses the controllable characteristics of the sound masking signal include a variable gain characteristic (Cunningham, Fig. 3; column 4, line 29 to column 5, lines 16; column 5, lines 39-66; Anderson, Figs. 1-2 and 4-7).

15. Regarding Claim 62, Cunningham as modified discloses the controllable characteristics of the sound masking signal include a variable frequency characteristic (Cunningham, Fig. 3; column 4, line 29 to column 5, lines 16; column 5, lines 39-66; Anderson, Figs. 1-2 and 4-7).

16. Regarding Claim 63, Cunningham as modified discloses the controllable characteristics of the sound masking signal include a volume characteristic (Cunningham, Fig. 3; column 4, line 29 to column 5, lines 16; column 5, lines 39-66; Anderson, Figs. 1-2 and 4-7).

17. Regarding Claim 64, Cunningham as modified discloses further comprising: a remote control unit configured to send adjustment signals wirelessly to the control unit; and wherein the control unit is configured to receive the adjustment signals and generate the control signals based on the received adjustment signals (Anderson, Figs. 1-2 and 7; column 3, lines 33-48; column 5, lines 1-11).

18. Regarding Claim 65, Cunningham as modified does not disclose the remote control unit is configured to receive sound measurements and generate the adjustment signals based on the received sound measurements. However, the Examiner takes Official Notice that it is well known in the art to provide the remote control unit which is configured to receive sound measurements and generate the adjustment signals based on the received sound measurements in order to make precise adjustments to the sound masking units based on the measurements received by the remote control. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Cunningham as modified to provide the remote

control unit (i.e. remote unit of Anderson which allows an operator at the sound masking unit to use an optional controls/display. Transceiver 47 is provided with return line 26, whereby the remote control 41 and the central computer 10 might exchange control information or status, which allows the remote console and the central computer to communicate remotely which provides ease of adjusting a plurality of parameters to obtain the desired output at a desired time) which is configured to receive sound measurements and generate the adjustment signals based on the received sound measurements in order to make precise adjustments to the sound masking units based on the measurements received by the remote control (Anderson, column 5, lines 1-11).

19. Regarding Claim 66, Cunningham as modified discloses the control unit is configured to generate control signals indicating which paging signal on the communication network a sound masking unit is to output (Cunningham, column 1, lines 62-68; column 3, lines 15-27; Anderson, Figs. 1 and 7; column 2, lines 20-68; column 3, lines 33-62; Roy, Figs. 2a-c; page 3, paragraph 0017; pages 8-9, paragraphs 0048-0055; page 12, paragraph 0069).

20. Claim 67 is essentially similar to Claim 51 and is rejected for the reasons states above apropos to Claim 51.

Response to Arguments

21. Applicant's arguments filed 1/30/2007 have been fully considered but they are not persuasive.

22. In response to applicant's argument that "The Examiner contends that Anderson teaches the deficiencies of Orfield with respect to the claimed invention, and that one skilled in the art would have applied these teachings to Orfield", the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

23. Applicant's arguments with respect to claims 51-67 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

February 20, 2007
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